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of flour is the proper proportion, according to the tenderness of the plants; mixed with land-plaster or plaster-of-Paris, one pound of the poison to a hundred and fifty pounds of the adulterant; with dry road-dust, one pound of the poison to a bushel and a half of the dust. In making liquid solutions, mix one pound of London purple with two hundred gallons of water, but first wet the powder and form a thin paste to prevent it from forming lumps. It should be put in the water twelve hours at least before use, for the best results. Paris green can be mixed in the same proportions, and in the same manner, as above.

#### WHITE'S STREET-RAILWAY RAIL AND CHAIR.

THE accompanying illustrations show an improved form of rail for street-railways, designed and manufactured by R. T. White of Boston. Fig. 1 shows the rail in section. Two pendant sides or girders are rolled integral with the top or tread of the rail, thus giving greater strength than the ordinary girder-rails having a central vertical rib. This rail has many advantages over the common form of tram or girder rails, being easier to lay and pave to;

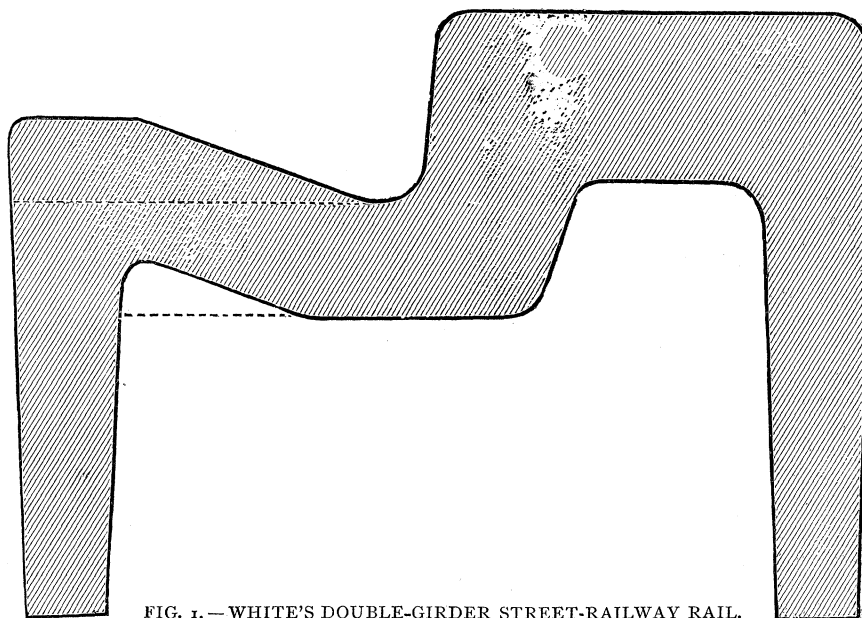


FIG. 1.—WHITE'S DOUBLE-GIRDER STREET-RAILWAY RAIL.

and the paving, on settling, cannot drop under the head and flange of the rail, — a very serious defect with the common form of girder-rails. The top or wearing part of this rail may be made as shown by the full or dotted lines; but, by making it as shown by the full lines, more wearing surface can be obtained on the head of the rail before the flange of the wheel touches the bottom of the groove. Carriage-wheels can easily pass over or out of this rail, and the groove cannot become clogged, as the flange of the car-wheel acts as a wedge as it passes along, forcing stones or dirt out of the way.

Fig. 2 shows the method of laying the new rail. It is secured on a chair by a bolt passing through the pendant sides of the rail and through the upper end of the chair. These chairs are placed at suitable intervals along the rails, and a similar chair of sufficient length is used at the ends, for connecting the rails together, thus making a substantial and practical joint. The chairs are set on and secured to wooden sleepers by lag screws, as shown; but the wooden sleepers may be dispensed with by enlarging the base of the chairs sufficiently to give them a solid bearing when tamped in the ground, or they may be set in concrete. In this case, tie-rods would be used to hold the rails to gauge.

FROM 1877 to 1888, forty-nine cases of leprosy have been treated at the St. Petersburg hospitals. About one-half of these are reported to be of subjects born in the city proper. Of the others, some come from the Baltic provinces, but there are also a few from districts where hitherto leprosy has been unknown.

#### ROYAL SOCIETY OF CANADA.

THE seventh annual meeting of the Royal Society of Canada took place in Ottawa on Tuesday, May 7. From the secretary's report, it seems that the delay in the appearance of the "Transactions of the Society" was caused by the incomplete nature of many of the papers. Four vacancies were filled during the year, — three in the English section, and one in the mathematical. In 1887 a committee was appointed to consider the proposition of taking steps in the direction of an imperial union of the services of similar societies, in connection with the Imperial Institute, to co-operate in developing and illustrating the resources of the empire. A favorable report having been returned, the committee was further instructed to communicate on the subject with the authorities of the Imperial Institute.

Delegates from affiliated societies were introduced, representing the Society of Canadian Literature, the Natural History Society, the Numismatical and Antiquarian Society, the Society for Historical Study, the Literature and History Society, the Geographical Society, the Quebec Institut Canadien, the Ottawa Institut Canadien, the Field Naturalist Club, the Entomological Society, the

Toronto Canadian Institute, and the Nova Scotia Historical Society.

Mr. Sandford Fleming, in his presidential address, touched on the fact, that, of the eighty original members, seven had passed away, and that the society had reason to congratulate itself upon the justification of all its elections. The address consisted mainly of an examination and inquiry into the origin of the two great races which form the Dominion. L'Abbé Casgrain followed with an address on the objects of the several sections. The scope of the papers may be gathered from the following partial list: "The Study of Political Science in Canada;" "Trade and Commerce in the Stone Ages;" "The Cartography of the Gulf of St. Lawrence;" "Nematophytin;" "De Marseilles à Oran, Souvenirs d'Afrique;" "L'Empereur Maximilian du Mexique;" "The Historical Influence of Physical Geography;" "Canadian Pre-Railway Transcontinental Journeys;" "Trilinear Co-ordinates on the Sphere, and Oblique Co-ordinates in Geometry of Three Dimensions;" "A Problem of Political Science;" "Papers on Higher Mathematics;" "The Ore Deposit of the Treadmill Mine, Alaska;" "The Microscopical Character of the said Ore;" "Fossil Sponges from Beds of the Quebec Group of Sir William Logan at Little Metis;" "Copper Deposits of the Sudbury District;" "Geography and Geology of the Big Bend of the Columbia."

On Wednesday evening a public meeting of the French section was held. Principal Grant addressed the audience on "Who are Canadians?" and L'Abbé Casgrain gave an oration on "The Death of Montcalm."